

Loan Level Accounting by Funding Source and Program Type

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Problem Identification

The South Carolina State Housing Finance and Development Authority (hereinafter referred to as “SC Housing”) was established in 1971. SC Housing’s mission is to place South Carolinians in safe and affordable housing through many of its programs and services offered to the citizens of South Carolina. One way SC Housing meets its mission is by offering a variety of affordable mortgage options to first-time homebuyers in the state. By offering competitive fixed rate first mortgage loans with down payment assistance allows the homebuyers to bring little or no money to the loan closing table. SC Housing is able to offer affordable mortgages through various programs and different funding sources.

SC Housing has recognized that we currently utilize many sources of data to include AOD/Emphasys, Black Knight Financial Systems, and Excel workbooks for tracking production volume, bond production spread and servicing operation net income. There is no way to quickly analyze the financial impact for current loan volume, the addition of new loan products or changes to our current portfolio. In addition, there are multiple individuals gathering the data who are not consulting and fail to recognize the impact each data set has on the other and the long-term implications these have to net income and liquidity. As SC Housing continues to look for new opportunities through the programs it offers and the sources of funding to provide these programs, there is not currently a model to determine cost effectiveness and benefit of each program and their respective funding source. After evaluating SC Housing’s two mortgage programs and

funding sources currently offered through the Mortgage Production division, it has become apparent how each one differs and provides its own specific benefit to SC Housing and to the homebuyer. After researching and evaluating other programs and funding sources offered throughout the private sector and those offered by other state Housing Finance Agencies, SC Housing must continue to explore new options to include evaluation of the cost effectiveness of those programs, how they could possibly impact our production and continue to improve the fulfillment of our mission. The purpose of this project is to prove and support the need for a uniform method or system to produce an accurate forecasting model which integrates market data, life of loan valuation figures and the ability to forecast information in order to actively manage the cash flow and margin targets for our single family loan products.

Description of Loan Programs

In an effort to understand the data collected from the implementation of a uniform reporting system, one must first understand the differences of a traditional mortgage transaction and how they are structured in comparison to how SC Housing's various programs offered to its lending partners through its two distinct funding sources, Mortgage Revenue Bond (MRB) and To Be Announced (TBA). Each impacts the loan level accounting in similar yet different ways. These differences between a traditional mortgage program and those of SC Housing, individual structure and workflow are outlined further in this section.

The first and oldest funding source at SC Housing is Mortgage Revenue Bonds, also known as MRB. Mortgage revenue bonds are tax-exempt bonds that state and local governments issue through housing finance agencies (HFAs) to help fund below-market-interest-rate mortgages for qualifying first-time homebuyers. Eligible borrowers must be first-time homebuyers with low to moderate incomes below 115 percent of median family income.¹ SC Housing is South Carolina's Housing Finance Agency (HFA) and has funded mortgage loans since 1979 with bond indentures. SC Housing has executed approximately fifty-two bond indentures over the last 39 years. In 2016, fifty-two Housing Finance Agencies issued more than \$6 billion in Mortgage Revenue Bonds.

¹ Freddie Mac, Single Family Business – Affordable Mortgage Products, www.freddiemac.com 2019

Recently, SC Housing took on a new funding source that continues to grow and gain popularity with our lending partners as an attractive means to reach additional first time homebuyers. This new funding source is known in the market as TBA. TBA stands for “To be announced”. TBA is a term to describe forward-settling mortgage-backed securities (MBS) trades. Pass through securities issued by Freddie Mac, Fannie Mae and Ginnie Mae are traded in the TBA market, and the term TBA is derived from the fact that the actual mortgage-backed security that will be delivered to fulfill a TBA trade is not designated at the time the trade is made. The securities are announced 48 hours prior to the established trade settlement date.² This funding source is fairly new to SC Housing. SC Housing began procuring a TBA provider in January 2018 and did not start taking reservations until August 2018. As of January 10, 2019, SC Housing has only settled on two TBA pools totaling 32 loans. While the TBA program has been in existence since the 1970s and has been utilized by numerous other state Housing Finance Agencies for several years, SC Housing was slow to offer this funding source.

These two funding sources each offer different incentives for first-time homebuyers and by offering both funding sources, SC Housing has a larger window of opportunity to reach more first-time homebuyers and accommodate the different needs each first-time homebuyer has. For example, MRB offers a lower rate and a set amount for down payment assistance, but has a life of loan mortgage insurance premium that is included in the monthly payment. TBA’s rate is slightly higher and the down payment is based on

² Investopedia –Investing>Alternative Investments – To Be Announced-TBA by James Chen 01/24/2018
www.investopedia.com

a percentage of the loan amount, but mortgage insurance is only required while the loan to value ratio is above 80%. Neither program is significantly more cost effective for the homebuyer, yet they offer solutions that meet different needs. For example, a first-time home buyer purchasing a home for \$100,000 would receive more down payment assistance through the MRB program, but a first-time home buyer purchasing a \$200,000 home TBA program would be required to bring less in closing cost, as the loan to value ratio is determine by the different type of program . See example below -

30-year Fixed Rate Conventional vs. FHA	FHA 4.500% Note Rate 96.5% LTV	Conventional 5.500% Note Rate 97%LTV
Home Sales Price	\$100,000.00	\$100,000.00
Down Payment Amount	\$6,000.00	\$2,910.00
Loan Amount	\$96,500.00	\$97,000.00
Closing Cost	\$3,000.00	\$3,000.00
Funds Needed for Closing	\$500.00	\$3,090.00

30-year Fixed Rate Conventional vs. FHA	FHA 4.500% Note Rate 96.5% LTV	Conventional 5.500% Note Rate 97%LTV
Home Sales Price	\$200,000.00	\$200,000.00
Down Payment Amount	\$6,000.00	\$5,820.00
Loan Amount	\$193,000.00	\$194,000.00
Closing Cost	\$4,500.00	\$4,500.00
Funds Needed for Closing	\$5,500.00	\$4,680.00

One of the major differences between the MRB and TBA programs is the amount of staff needed to run each program. During a basic mortgage process there are several key components to completing a mortgage transaction. Those include file set up and disclosure, processing, underwriting, closing, funding and shipping. The MRB and TBA market utilize many of these components but each process differs significantly.

Traditional Mortgage Process Flow –



The MRB process requires more staff than the TBA process to complete the entire file process. Currently, SC Housing has seven staff members who complete the four steps.

MRB Mortgage Process Flow –



The TBA process is much simpler and requires less staff than MRB. Most of the job tasks associated with the TBA program falls on the provider and SC Housing is only required complete a minimum review to obtain information on the file being purchased. This review is completed by contract underwriters costing \$35.00 per file. SC Housing staff is limited to one administrative staff member, who can process up to 100 files each month.

TBA Mortgage Process Flow –



The other major difference is the administrative cost of completing a bond transaction. SC Housing is currently completing bond indentures between \$50,000,000 and \$75,000,000. The average loan size is \$128,000 which allows on approximately 585 loans funded on a \$75,000,000 bond. SC Housing completes two bond indentures each year. The most recent bond indenture completed by SC Housing was for \$70,000,000. The legal fees associated with completing this indenture were \$751,535; this is an average cost of \$1,277.81 per file. The charts below depict the net profit to the business unit after taking the revenue brought in and deducting both direct and indirect

expenses, on a per loan basis, by each of the current funding sources. These charts only account for the front end revenue and expense associated with the MRB and TBA loans. Life of loan income and fees are not calculated on a per loan basis, but on a bond indenture basis for MRB loans. SC Housing does not service the TBA loan and therefore does not receive any life of loan income for the first mortgage generated by this funding source.

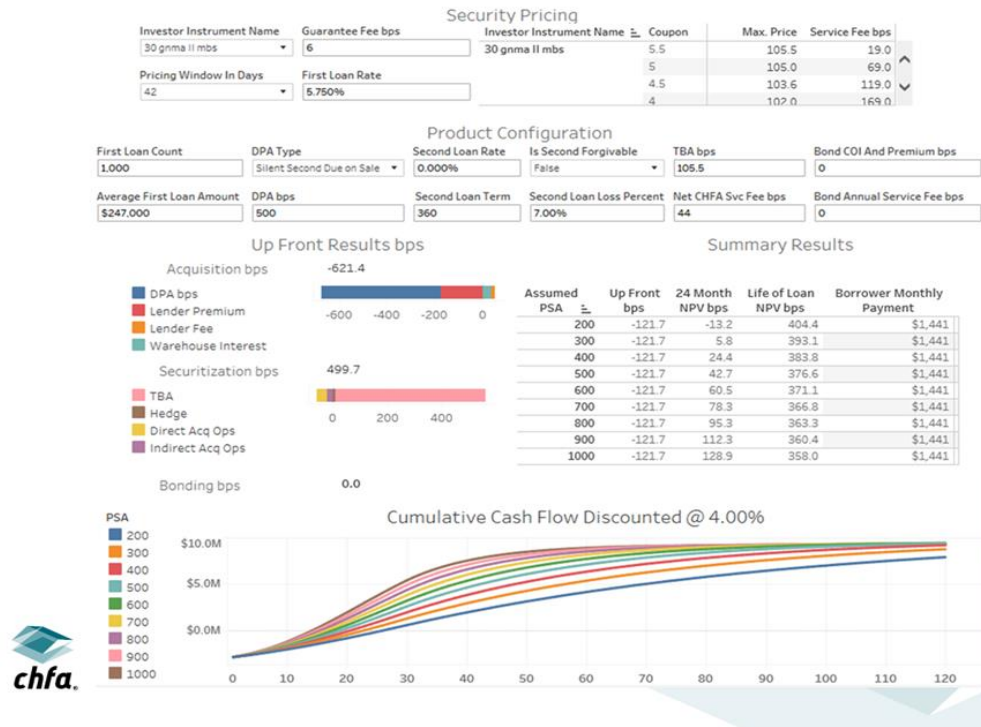
MRB (per loan)			
Revenue In	Fees	\$	400.00
	Other Revenue	\$	1,434.93
	Total Revenue	\$	1,834.93
Less Direct Expense	Salaries	\$	741.56
	Contract Services	\$	-
	Total Direct	\$	741.56
Less Indirect Expense	Supplies & Materials	\$	13.80
	Fixed Charges	\$	45.89
	Utilities	\$	2.94
	Debt Service	\$	27.28
	Legal Fees	\$	1,277.81
	Total Indirect	\$	1,367.72
Net Business Unit Profit			\$ (274.35)

TBA (per loan)			
Revenue In	Fees	\$	-
	Other Revenue	\$	1,179.83
	Total Revenue	\$	1,179.83
Less Direct Expense	Salaries	\$	146.29
	Contract Services	\$	35.00
	Total Direct	\$	181.29
Less Indirect Expense	Supplies & Materials	\$	13.80
	Fixed Charges	\$	45.89
	Utilities	\$	2.94
	Debt Service	\$	27.28
	Legal Fees	\$	-
	Total Indirect	\$	89.91
Net Business Unit Profit			\$ 908.63

Implementation Plan

Because of this evaluation, SC Housing is now aware of the need to procure or develop software to create various models that will track fees, income and forecast a more realistic and accurate projection of our mortgage portfolio. Dependent upon the desired method and route SC Housing decides to take, the timeframe of implementation and the initial cost outlay, as well as annual maintenance fees associated will vary significantly. The two software packages that have been researched and used by other state Housing Finance Agencies are Microsoft's "Power BI" and another system called Tableau. Either system will have an initial set-up cost, present the need to procure, at an additional cost, an independent server and will have an annual maintenance cost associated with each.

We reviewed a Colorado Housing Finance Agency's Single Family Life of Loan Pricing tool and found several useful reports and measurable tools that will help us in our implementation. Examples of these are shown below.



yearly comparisons

Loan Type	2017 - Total					2018 - YTD					Expected Full Year Production 2018			
	UPB Purchased	% of UPB	NPV bps	NPV Dollars	% of NPV	UPB Purchased	% of UPB	NPV bps	NPV Dollars	% of NPV	UPB Purchased	% of UPB	NPV bps	NPV Dollars
Taxable Loans														
Conventional products														
Conventional 1	\$15,156,000	1%	98	\$148,000	1%	\$16,630,000	3%	67	\$ 111,000	1%	\$ 95,357,000	3%	67	\$ 640,000
Conventional 2	\$119,997,000	9%	107	\$1,278,000	4%	\$82,224,000	15%	84	\$ 690,000	6%	\$120,014,000	15%	84	\$ 1,009,000
Conventional 3	\$138,715,000	11%	271	\$3,753,000	13%	\$69,084,000	12%	268	\$1,849,000	17%	\$254,282,000	12%	268	\$ 6,809,000
Conventional Total	\$273,868,000	21%	158	\$5,179,000	18%	\$167,938,000	30%	140	\$2,650,000	25%	\$469,653,000	30%	140	\$ 8,458,000



projected impacts

Product	Months to Break Even	IRR	LOL bps	Current Period bps	Forecast \$(M)	Life of Loan \$(M)	Current Period \$(M)	Seconds \$(M)
Bonds w/ 5% second	47	15.6%	456.9	(459.3)	\$ 300	13.71	(13.78)	\$ 15.0
Conventional - par	0	22.4%	199.1	126.4	\$ 79	1.57	1.00	\$ -
Conventional w/ MI - par	0	21.2%	194.4	115.7	\$ 89	1.74	1.03	\$ -
Conventional w/ MI - 4% grant	0	8.7%	81.4	18.1	\$ 170	1.38	0.31	\$ -
Conventional w/ MI - 5% second	36	14.7%	261.6	(163.9)	\$ 187	4.90	(3.07)	\$ 9.4
Government - par	0	38.6%	301.7	259.9	\$ 13	0.38	0.33	\$ -
Government - 4% grant	0	16.9%	196.9	20.5	\$ 740	14.56	1.52	\$ -
Government - 5% second	21	20.5%	374.8	(76.8)	\$ 523	19.59	(4.01)	\$ 26.1
		17.3%	275.4	(79.44)	\$ 2,100	\$ 57.8	\$ (16.68)	\$ 50.5



With the implementation of the procured software, SC Housing will need to determine what staff members and resources they are willing to dedicate to this project, as well as, the continuance to maintain the data systems associated with the ongoing collection and reporting of data. In the beginning phases, staff members for finance, servicing, IT and mortgage production will be needed to facilitate the uploading of historical data both at the bond and loan level, determine measurable data points, assure accurate financial analysis is being performed and final reporting is accurate and concise.

In addition, once the implementation and final determination is complete, it will be necessary to integrate an ongoing process into our operational procedures to address the process that will be affected and address any additional duties that staff will be

accountable for. Staff members from all respective areas will be needed to upload data on both a daily and monthly schedule going forward track and perform analysis of market data and perform various comparisons of the data collected with that of SC Housing and other state Housing Finance Agencies.

Evaluation Method

Based on today's current methods of data collection and evaluation, SC Housing does not have the ability to provide an accurate and realistic loan level accounting of the loans in its portfolio. Since there is currently no measurable or historical data at this level, we are unable to create a starting point to identify if our current method is effective. The evaluation to determine the efficiency and effectiveness of this solution will be ongoing. As this project goes from implementation and once data is collected, it is important that we evaluate the results and continue to look for ways to improve our revenue, modify our existing mortgage programs and add additional programs to capture a larger share of the first time homebuyer market.

SC Housing is currently utilizing George K. Baum & Company, as our financial advisor to provide guidance on revenue stream on all MRB loans as they are moved from one bond to another to maximize the income for each loan serviced by SC Housing. The cost of this guidance is included in the legal fees associated with completing a bond indenture. Once implemented, SC Housing will have the ability to make more effective decisions on bond execution without relying on George K. Baum & Company as frequently.

Summary

As SC Housing continues to explore ways to increase profitability, search for additional cost saving measures for its first-time homebuyers, and expanding its current product offering, there is definite need for SC Housing to obtain a reporting system. By putting this into place, SC Housing will be able to analyze production volume, bond production spread and servicing operation net income. By the creation and implementation of this system, this will allow SC Housing to measure dynamically across all single family functions, for both current and life-of-loan, net value and internal rate of return through the analysis of –

- Current market interest rates
- Premiums and Pay-ups
- Servicing expense and revenue
- Down payment assistance, service release premiums and hedging cost

Obtaining a system to track, analyze and report data on future mortgage production and the production for the past 30 years, will allow SC Housing the ability to offer mortgage interest rates comparable to the private sector market while reducing the operational cost to purchase mortgage loans from our lending partners. This system will also help insure SC Housing is meeting its mission to provide South Carolinians with safe and affordable housing by being able to offer more individualized programs that meet the needs of future homeowners.

References

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National Council of State Housing Authorities (NCSHA) – State Housing Finance Agencies: At the Center of the Affordable Housing System – Publication by NCSHA staff 2018